Ian Gallagher

Curriculum Vitae

☎ (831) 818-9080
✉ iangallagherm@gmail.com

━━━━ Education

2017–2021	**B.S. Mathematics**, *Cal Poly*, San Luis Obispo, *3.9 GPA* Graduated Summa Cum Laude Minor in Computer Science

━━━━ Experience

July 2021– May 2023	**Software Engineer**, *Pariveda Solutions*, San Francisco Tasked with improvements to backend service infrastructure and increasing observability and alerting of systems. Made optimizations to reduce request latency by 20% and request volume by more than 50% for core customer support data.
2019–2021	**Software Team Member**, *Cal Poly CubeSat Laboratory* Software lead for NASA ER-2 custom cubesat payload carrier, as well as a payload designed to record the in-flight vibrational profile of launches. Made extensive changes to the carrier's flight computer's event loop architecture, and troubleshooted interface problems with external electrical components. Updated an existing microcontroller's analog to digital converter sampling pipeline to interface with the carrier.
Sprint 2021	**Senior Project**, *Cal Poly Mathematics Department* Worked with Dr. Eric Brussel answering followup questions from our prior summer research project. Theorized and then proved results about the maximal commutative subalgebras of two by two matrices over a finite field. Fully determined the conjugacy classes of the subalgebras and gave formulas for the count of each type of subalgebra for a given finite field.
Summer 2020	**Frost Research Scholar**, *Cal Poly Mathematics Department* Member of pure mathematics student research team lead by Dr. Eric Brussel. Studied results about the structure of the moduli space of embedded complex planes within the quaternions. We extended these results to categorize the embedded commutative sub-algebras of generalized quaternions over the real numbers, determining their conjugacy classes and a representation of the moduli spaces.
Summer 2019	**Frost Research Scholar**, *Cal Poly Mathematics Department* Worked with Dr. Charles D. Camp to implement and analyze theoretical climate models from research papers in Matlab. We compiled many runs of the models over a large parameter space and with varied forcing signals to study how changing the strength and timescales of these signals affected the periodicity and synchronization of the various models. Created visuals and statistical tests to investigate link between internal model behavior and external forcing signals.

Honors

2021   **Robert P. Balles Most Outstanding Senior**, *Cal Poly Mathematics Department*
One of two students selected on the basis of participation in clubs or societies, contribution to the image of the department, and scholastic achievement.

2020   **Accenture Outstanding Junior of the Year**, *Cal Poly Mathematics Department*
Awarded to a single junior in the mathematics major for demonstrating superior leadership skills and the ability to work effectively with peers and faculty.

2019, 2020   **Edward Van Duyne Memorial Scholarship**, *Cal Poly Mathematics Department*
Two time recipient of scholarship intended for high-achieving students in the mathematics major.